

 Our World, Our Work

The Big Opportunity:

Education & Skills Development for a
Climate-Adapted and Green Economy



Africa Climate Summit
First Ladies Pavilion Panel Session
Monday, September 4, 2023

SUMMARY

This background paper provides context for the panel discussion **The Big Opportunity: Education and Skills Development for a Climate-Adapted and Green Economy**, as part of the Africa Climate Summit in Nairobi on September 4–6, 2023. Hosted by Her Excellency Mama Rachel Ruto, the First Lady of the Republic of Kenya, the panel brings together African First Ladies and other leaders to highlight the power of education and skills development to propel the future workforce into a climate-adapted and green economy.

The panel will highlight the need to implement recommendations on incorporating skills transformation as a key part of climate policy, climate finance, and the future of work strategies. It will discuss scalable solutions to address five gaps that are hindering countries from developing the human capital needed to create employment and entrepreneurship opportunities for youth and existing workers to support the green transformation. These include gaps in information, education and skills training, coordination, financing, and inclusion. By closing these gaps, we can combat the effects of climate change and support the creation of more prosperous, sustainable, and equitable societies.

Africa, as the continent with the largest youth population, is ideally positioned to lead this effort. The panel will build momentum to catalyze international support for a High Ambition Coalition to be launched at COP28 with the following dual goals:

- 1. Set a global agenda to support skills transformation as a key decarbonization and workforce development strategy**
 - 2. Politically champion transformation of education and training systems in order to equip young people with the skills and competencies they need to succeed in the future of work**
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The Big Opportunity for Africa: Unlocking Green Transformation and Employment for Youth

The impacts of climate change are being felt in Africa and around the world and are creating a shift in the global economy that will transform the future of work.

Africa is experiencing more severe impacts from climate change than many other parts of the world, including increased droughts, floods, sea level rise, and heatwaves, threatening agricultural productivity, food security, and economic development. Africa is highly vulnerable to climate change given that many of its economies are driven by climate-dependent activities and products. Further, 25 of the 33 countries in which children bear extremely high vulnerability to climate shocks are located in Africa.¹

At the same time, the transition to a more sustainable and climate-adapted global economy will create significant job opportunities, even while some jobs are lost. According to the World Economic Forum, approximately one-quarter of jobs will change by 2027, with 69 million new jobs created and 83 million current jobs eliminated.² The ILO estimates that a net increase of at least 18 million jobs will be generated worldwide from the transition to clean energy and another 7 million jobs from the circular economy. McKinsey estimates that Africa could earn up in \$35 billion in revenue from green products and the creation of 800,000 new jobs by 2030.³

Green and Blue Jobs – A Definition

Green and blue jobs are those that reduce the consumption of energy and raw materials, limit greenhouse gas emissions, minimize waste and pollution, protect and/or restore ecosystems, and enable enterprises and communities to adapt to change.

Blue jobs are a subset of green jobs that focus on bodies of water (i.e., lakes, rivers, oceans) and water resources and ecosystems (e.g., fisheries or mangroves).

While Africa is experiencing stark changes in living conditions due to climate change, it is also ideally positioned to lead the world in adapting to the effects of climate change and developing a more sustainable economic growth model. Africa has the potential to expand its high-value agriculture, tourism, business services, and other tradable services that can be more sustainable and create greener jobs than traditional industry and manufacturing.⁴ Green and blue jobs can be created both in emerging sectors such as renewable energy and climate-smart agriculture, as well as in traditional sectors such as energy, construction and transport that are seeking to become more sustainable over time.

Capturing synergies between education and climate change adaptation, mitigation, and job creation requires a global focus on transforming education and skills.

Africa has great ability to drive the green transition given its extensive natural as well as human capital. It is the youngest continent on earth, and its growing youth population will exceed that of India and China combined by 2075.⁵ Many countries in Africa are poised to experience demographic transitions in the coming decades if fertility rates continue to decline, and more women enter the labor force. A demographic dividend can be reaped if young people possess the education and skills needed to fulfill their potential and contribute to sustainable economies.

As the youngest continent, it can lead a green transformation of the labor force by preparing its young people with the skills and knowledge to grow sustainable and decarbonized economies. Ensuring that the majority of young people, especially women and those from marginalized backgrounds who are disproportionately unemployed or underemployed within the informal economy, are able to access quality education and skills training will be crucial for reaping the benefits of the green transition.

Capturing synergies between education and climate change adaptation, mitigation, and job creation requires a global focus on transforming education and skills. We know from extensive research that education makes individuals and communities more resilient and adaptive to climate change.⁶ Education and skilling also enable young people to qualify for a greater range of employment and entrepreneurship opportunities, including supporting the green transition, while improving health, raising incomes, and reducing vulnerability. Attention to the youngest learners is also crucial as a key to building foundational skills of literacy and numeracy upon which all other skills are built.

African Initiatives for a Green Transition and Skills Development

Recognizing the significance of the opportunity afforded by the green transition, and the centrality of human capital in seizing it, many African institutions have stepped up efforts in research and data, policy commitments and frameworks, and new financing mechanisms.

Research and Data

The African Development Bank's *Green Jobs for Women in Africa* report calls for policies to prepare women and girls to contribute to high-productivity, green jobs through "education, skills-development, capacity-building and institutional support to women-led businesses." It emphasizes that in addition to education and skills policies, measures are needed to address structural barriers to women in lending, access to land, and social norms that lead to a high burden of unpaid household and care responsibilities.⁷ The **African Centre for a Green Economy** provides research solutions to accelerate the transition to a low carbon economy, focusing on food systems, entrepreneurship, and climate finance.

Policy Commitments and Frameworks

Governments in Africa have made significant commitments to enacting policies to promote climate change mitigation and adaptation. Over 40 African countries have increased the ambition of their Nationally Determined Contributions (NDCs) under the Paris Climate Accord, and over 80% of African national climate plans include targets for greenhouse gas emissions reductions, focusing especially on reducing emissions in agriculture, energy, waste, and land management.⁸ Of the 43 African countries' updated or new Nationally Determined Contributions under the Paris Climate Accord, 16 mention climate change education.

In July and August 2023, the African Development Group within the African Development Bank held the Global Community of Practice Policy Dialogue "**Leveraging Potentials of the Youth for Inclusive, Green and Sustainable Development in Africa.**" The African Development Bank noted the importance of securing decent green jobs for youth, especially in sectors such as agriculture and construction, to support adaptation to climate change.⁹

The African Union Green Recovery Action Plan 2021–2027 highlights the potential to create green jobs in sectors such as renewable energy, sustainable land management, forestry, and eco-tourism while building resilient cities with a focus on water, information, and communication technologies. According to the African Union, “[a] clean and resilient recovery in Africa will lead to employment in the industries of the future whilst ensuring that we address the linked challenges of public health, prosperity and climate change.”¹⁰ **The African Union’s Climate Change and Resilient Development Strategy and Action Plan (2022-32)** recognizes that climate change education is key for both climate mitigation and adaptation opportunities.¹¹

Financing

Africa’s Adaptation Acceleration Program, endorsed by the African Union, is collaborating with the African Development Bank and Global Center on Adaptation to spur climate resilience. It will invest \$12.5 billion in the next five years to modernize key sectors, reduce emissions, and support adaptation.

The African Development Bank is helping to promote resilient, green, and sustainable growth through the **African Green Bank Initiative**, announced at the UNFCC COP 27 in Egypt, to support implementation of African countries’ NDCs. The African Green Bank will increase the continent’s access to climate

financing by reducing financing costs and mobilizing private sector investments. The initiative is backed by the African Development Bank’s **African Green Finance Fund (AG3F)**.¹² The first green finance facilities are being rolled out in two public financial institutions in Benin and Côte d’Ivoire in 2023.¹³

These initiatives can only be successful if accelerated through greater attention to human capital, education, and skills development.

Insufficient global attention is focused on the need to develop quality education and skills training systems that will allow countries to seize economic and employment opportunities created by the green transition. Despite the benefits of education for climate adaptation, mitigation, and employment, education and technical skills for the green economy are rarely integrated into climate change strategies or general education and technical training systems in Africa. This challenge is not unique to Africa; it is present in varying degrees worldwide.



Photo: DRC-IYDA/Esther Nsapu

Translating global demand in emerging green sectors into an opportunity for Africa will require new skills, new forms of leadership, and the reskilling of those in impacted industries and communities. This opportunity calls for a significant scale-up in investments in education and training. Average years of schooling are lower in Africa compared to other regions, and progress in secondary and tertiary education is currently too slow to equip young people to participate in Africa's economic engine. In Sub-Saharan Africa and in the Middle East and North Africa region, only 11 percent and 23 percent of all youth aged 15 to 24 have basic secondary literacy and numeracy skills, respectively.¹⁴

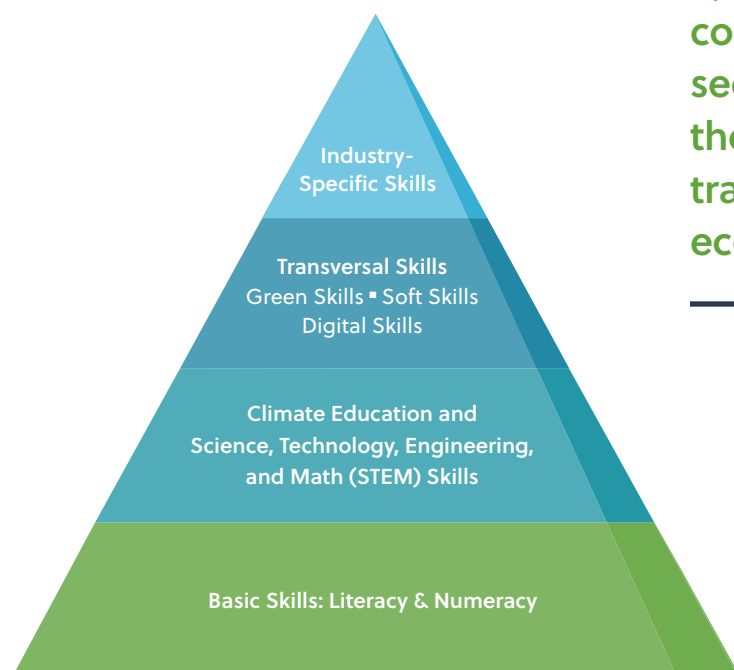
Greater attention and investment in education and skills systems are needed to prepare young people to drive green transformation and support more sustainable livelihoods and societies. Research by Education Development Center (EDC) identified over 270 different occupations in the fastest growing green and blue sectors globally: renewable energy, green construction, waste management, and agriculture.¹⁵ Labor-market oriented education systems, including technical and vocational education and training (TVET), as well as labor market systems, must be strengthened at all levels to prepare youth

and existing workers to access these and other sustainability-related jobs and entrepreneurship.

Investment in labor market systems and stronger cooperation with the private sector are crucial for capturing the benefit of the green transition for workers and for the economy overall. Labor market systems include labor information as well as active labor market policies and institutional capacity and coordination. Labor market information systems (LMIS) collect, store, analyze, and disseminate information about the labor market for policymakers, businesses, and individuals. Cooperation with the private sector can assist in identifying training priorities, designing curricula, providing work-based learning, and ultimately linking workers with employment opportunities.

Importantly, green and blue skills and climate education must be built on a strong foundation of basic literacy and numeracy; science, technology, engineering, and math (STEM) skills; and transversal skills, such as digital, communication, and problem-solving skills. Finally, higher value-added jobs will require additional technical training in green and blue skills specific to industries such as renewable energy, waste management, green construction, and eco-tourism (Figure 1).¹⁶

Figure 1. Green Jobs Skills Requirements for a Just Transition



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Addressing Five Key Gaps: Enabling Africa to Build the Human Capital Needed for a Green Transition

Five gaps must be addressed to allow Africa, and much of the world, to build the human capital necessary to drive the transition to a low-carbon economy and realize the promise of green jobs.

These gaps have been identified through research and practice, including years of experience by governments, implementing partners, and multilateral institutions in youth, workforce, and sustainable development programming.¹⁷

1. Information Gap

- Little data exist at the country and especially local levels on demand trends for green and blue labor, emerging growth sectors, and skills requirements.
- Weak LMISs impede the ability of policymakers, education and training institutions, businesses, and individuals to use data for decision-making, thereby creating inefficiencies in identifying skills gaps and allowing the labor market to match workers with jobs.
- Few outlets exist to offer career guidance for young people. Career guidance helps young people explore their interests and values, identify their skills and abilities, learn about the labor market to make realistic career choices, develop their career planning skills, and build confidence and motivation.

2. Education and Skills Gap

- Youth in Africa, as in much of the world, lack education on climate change and sustainable development, as well as technical training in green and blue skills.
- Acquired skills often do not reflect the needs of the labor market and practice-orientation is often lacking.
- Green and blue skills rely on a strong foundation of literacy and numeracy, and they are reinforced by skills such as STEM and digital literacy, communication, problem-solving and work-readiness.
- Teachers and training instructors require additional professional development in green skills.
- The global education agenda has not highlighted the importance of climate and sustainable development education within education sector plans.
- Interventions are needed at all skill levels, including qualification of specialists and managers in key sectors for the green transformation.

3. Coordination Gap

- Education and skills training must be integrated within national climate mitigation and adaptation strategies.
- Little coordination exists between the government, the private sector, youth, education and training institutions—including universities and think tanks—and nongovernmental organizations (NGOs) to assess labor market and skills needs.
- Active partnership is needed with the private sector to design training programs, provide cooperative skills training, and connect labor demand and supply.
- Coordination and a clear agenda are required at the local and national levels, as well as within Africa's sub-regions, continent-wide, and globally, to identify priorities and actions to support adequate education and skills training for a green transition.
- The full potential of youth leadership and advocacy to drive and shape policy and implementation of training in green and blue skills is still unrealized.

4. Financing Gap

- A lack of sufficient financing hinders our transition to green economies and to developing better skills and education for youth.
- UNESCO estimates that an additional \$70 billion per year is needed for African countries to achieve Sustainable Development Goal 4 of universal, quality education for all.¹⁸
- The African Development Bank reports that an additional \$213 billion must be mobilized from the private sector to complement public funding and close the climate financing gap in Africa.¹⁹
- A need to open climate funds—multilateral, bilateral, philanthropic, etc.—and compensation projects for education and skills qualifications programs.

5. Inclusion Gap

- As economies worldwide decarbonize, some communities as well as existing workers within particular industries, will be especially affected.
- Existing workers experiencing dislocation, and populations most impacted by climate change, including women, youth without access to quality education and skills training, and marginalized groups, should be prioritized.
- Targeted reskilling and other support will be required for those in industries and communities impacted by economic upheaval due to decarbonization.
- Focus on a green transition should not divert resources and attention from the continued need to support out-of-school youth to access education and skills and to improve learning outcomes at all levels of education.

Addressing these five gaps—information, education and skills, coordination, financing, and inclusion—would allow Africa to strengthen its human capital, power sustainable development and job creation, and serve as a model for other regions as the world makes a transition to a low-carbon economy.

Africa is already leading on several innovations that address these gaps, particularly the education and skills training gap. Thirteen countries throughout Africa, including Benin, Ethiopia, and Kenya, are partnering with **UN CC:Learn** to develop a climate change learning strategy with priority actions to improve climate-related education and skills. Actions include developing teaching materials and capacity building for teachers.

Throughout the continent, new green jobs curricula are being tested and rolled out by general education systems, individual training institutions, and centers of excellence. The Rift Valley Technical Training Institute in Kenya and the Mauritius Institute of Training and Development are two examples. Other institutions are developing new teacher training curricula to enable teachers to learn green skills and incorporate them into the TVET curriculum. The Government of Zimbabwe incorporates climate change education into its national curriculum framework through various subjects, co-curricular activities, and extra-curricular lessons. Capacity-building programs for teacher training in Zimbabwe include technical requirements for managing climate change mitigation. The Zambia Green Jobs Programme is strengthening competitiveness and sustainable business among MSMEs (micro, small, and medium-sized enterprises) in the country's building construction sector, including green skills and business development activities.

These and other models across Africa should be assessed and disseminated, with successful models scaled through partnerships across the public, private, and nonprofit sectors, both regionally and globally. Attention will be needed to identify and expand solutions that help close the five key gaps of information, education and skills, coordination, financing and inclusion.

Call to Action

We see an urgent need to form a High Ambition Coalition including leaders from all regions of the world to bring young people, governments, implementing organizations, the private sector, multilateral institutions, philanthropies, universities, and think tanks together to ensure that we close the five key gaps and develop the human capital needed to power the green transformation.

Following are the specific goals of the High Ambition Coalition, which will be announced at COP 28:

- 1. Develop a new narrative around closing the five gaps to support human capital transformation as a key climate and future of work strategy**
- 2. Politically champion the transformation of education and training systems in order to equip young people with the skills and competences they need to succeed in the future of work**

Actions of the High Ambition Coalition might include the following:

- + **Focusing attention on the five gaps in information, education and skills, coordination, financing, and inclusion** that hinder the development of the human capital needed for a just transition to address the critical global challenges of climate change and youth unemployment
- + **Working with governments to incorporate climate education and green skills priorities and actions within climate policy and Nationally Determined Contributions**, including climate financing
- + **Measuring the scalability potential of emerging solutions**, drawing on approaches specifically targeting green and blue skilling, as well as on solutions more broadly designed for improving learning outcomes, workforce development, and employment opportunities
- + **Establishing co-design teams** with governments in five to seven champion countries for nationally scaled programs addressing education, skills, and climate change, including where coalition partners already have relevant initiatives and networks of influence as a model for scale up
- + **Leveraging public and private financing** through international financing instruments, such as donor governments, multilateral development banks, international climate financing institutions, NGOs in the education and environment sectors, as well as leading philanthropies and private investors
- + **Making connections and catalyzing partnerships**, with a focus on peer-to-peer learning and building momentum across national and sectoral boundaries; developing partnerships and exchange mechanisms between low-, middle- and high-income countries and the private sector and civil society; and engaging youth representing diverse regions of the world
- + **Accelerating adoption in a wider set of low-, middle-, and high-income countries** that contextually adapt, implement, and monitor evidence-based solutions at scale, sharing results and tools as part of a global learning community



This background paper has been authored by the Education Development Center (EDC), a global nonprofit organization that advances lasting solutions to the most pressing educational, health, and workforce challenges across the globe. Our work is guided by evidence, empathy, and experience.

Our World, Our Work is a 10-year initiative that seeks to accelerate youth employment and self-employment in the green and blue economies. Initially spearheaded by EDC, this initiative is convening leading stakeholders to promote a just, more inclusive green economic transition while also addressing the employment crisis faced by large numbers of youth around the world.



Our goal is for 1 million young people (60% young women) between the ages of 18 to 30 to be employed or self-employed in decent, inclusive, sustainable green and blue jobs over the next 10 years.

Endnotes

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